

Appl. No. 10/669,221
Attorney Docket No.: 2003B101
Amdt. dated February 7, 2006
Reply to OA of October 7, 2005

REMARKS/ARGUMENTS

Status of the Claims

The present application is directed, generally, to collation shrink films having a core layer comprising a blend of high density polyethylene and a low density polyethylene and skin layers comprising a metallocene-catalyzed polyethylene. Claims 1 through 18, original to the application, are currently pending. All of the claims have been rejected under 35 U.S.C. §103(a).

Claim Rejections Under 35 U.S.C. §103(a)

Claims 1 through 18 have been rejected on the grounds that they are rendered obvious by U.S. Patent No. 6,437,064 ("Eckstein") in view of "the admitted prior art." Office Action at page 2. In particular, the Office Action alleges that the present invention is obvious because "Eckstein et al. do not specifically teach the layer combination and blends as instantly claimed however the admitted prior art teaches a basic three layer heat shrinkable film with an HDPE core and polyethylene outer layers." Office Action at pages 2-3. Applicants respectfully disagree.

In relevant part, Eckstein describes "a multilayer structure of at least three layers wherein the core layer is a barrier layer."¹ This barrier layer of Eckstein is equivalent to layer B, the core layer, as set forth in the pending claims. Eckstein stresses repeatedly that the barrier layer used therein must function as an oxygen and moisture barrier in order to be effective. See, e.g., Eckstein at, *inter alia*, col. 1, lines 62-65; col. 2, lines 1-4; col. 5, lines 46-61; and col. 9, lines 6-65. Compositions suitable for use in these barrier layers, according to Eckstein, include copolymers of vinylidene chloride, vinyl chloride, and/or methyl acrylate, ethylene vinyl alcohol, nylon, aluminum, and styrene polymers or copolymers. Eckstein at col. 5, lines 46-61.

In contrast, the core layer of the present invention is a blend comprising high density and low density polyethylene. Neither of these two components is mentioned as a suitable barrier layer by Eckstein. The reason for this omission is that HDPE, LDPE, and blends thereof would not provide sufficient barrier properties, particularly sufficient oxygen barrier properties, as

¹ Eckstein also generically describes films having less than three layers, however such films are not relevant to the presently pending claims. Where Eckstein describes films having three or more layers, such films are described as having a central barrier layer as discussed more fully above.

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stressed by Eckstein. For example, the following chart shows water vapor and oxygen transmission rates for several of the compositions described by Eckstein, as well as for HDPE and LDPE, where water vapor transmission rate (WVTR) is measured in $\text{g/m}^2/\text{day}$ and oxygen transmission rate (OTR) is measured in $\text{cm}^3/\text{m}^2/\text{day}/\text{atm}$.

Film (25 μm)	OTR	WVTR
Aluminum	<0.1	<0.1
EVOH	0.2-1.6	24-120
PVdC	0.8-9.2	0.3-3.2
PA6 (Nylon 6)	80	200
HDPE	2100	6-8
LDPE	7100	16-24

Source: Day, *Principles and Applications of Modified Atmosphere Packaging of Food*, (1993) 115-133.

As shown by the above table, HDPE and LDPE (and, presumably, blends thereof) clearly do not exhibit oxygen and moisture barrier properties on a par with those compositions described as suitable for use in the barrier layer of the films described by Eckstein.

For these reasons, one of ordinary skill in the art would not be motivated to look to the other prior art sources cited by the Examiner (namely, "the admitted prior art") to modify the barrier layers described by Eckstein. Certainly, such a person having ordinary skill would not replace the barrier layers of Eckstein with a blend comprising HDPE and LDPE, as used in the core layer of the pending claims, because Eckstein teaches away from such a combination by requiring high oxygen and moisture barrier performance.

To establish a *prima facie* case of obviousness, three conditions must be met: (1) there must be a suggestion or motivation to combine the cited references; (2) there must be a reasonable expectation of success; and (3) the reference, or references when combined, must teach or suggest all of the claim limitations. MPEP §2143. "A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. MPEP §2141.02, citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983). Eckstein itself does not teach or suggest all of the limitations of the

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presently pending claims. Furthermore, one of skill in the art would not be motivated to look to the other prior art of record to modify the films of Eckstein because Eckstein teaches away from forming a film having three or more layers wherein the core layer comprises a blend of high density and low density polyethylenes, as claimed herein.

For all of the foregoing reasons, Applicants believe that the pending claims are not rendered obvious by Eckstein and the other prior art of record. Accordingly, withdrawal of the outstanding claim rejections is respectfully requested.

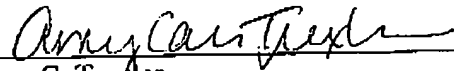
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CONCLUSION

In view of the foregoing remarks, Applicants believe that the pending claims are allowable and that the present case is in condition for allowance. Applicants invite the Examiner to telephone the undersigned attorney if there are any other issues outstanding which have not been presented to the Examiner's satisfaction.

Respectfully submitted,

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